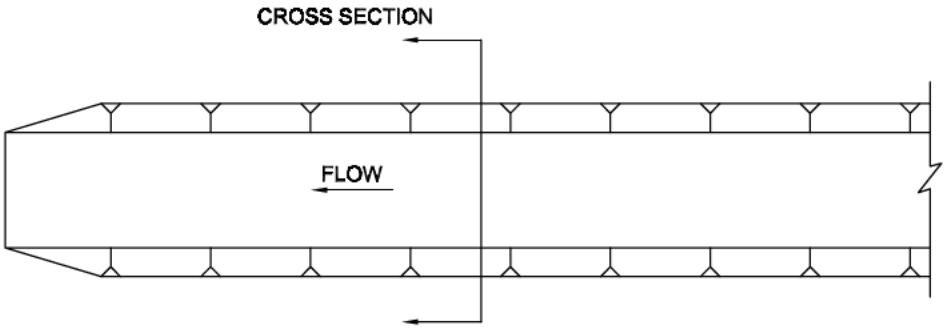
Public Works Standard Drawings Subcommittee Meeting

Monday August 6, 2018
Regional Forum Room

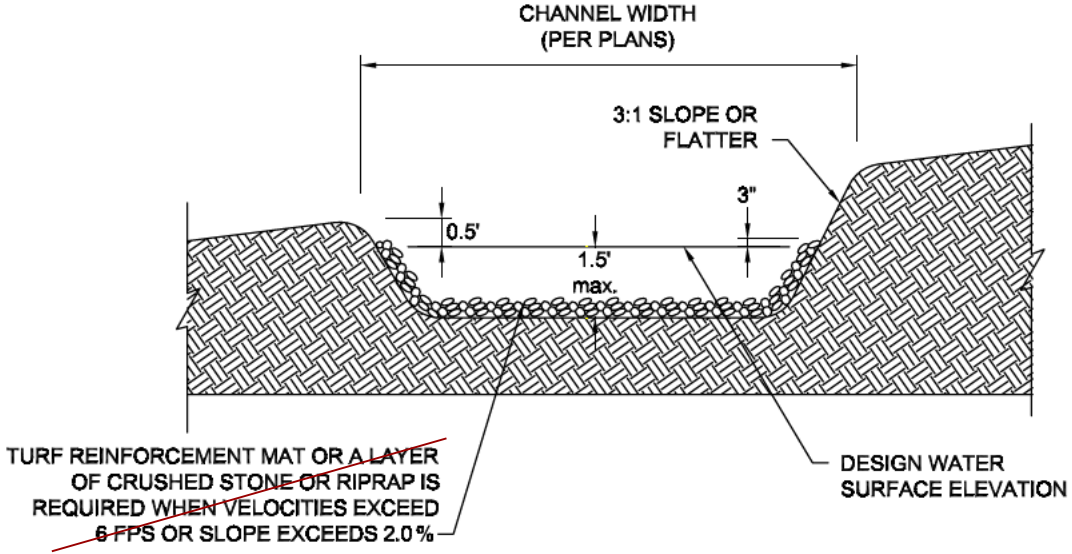
NCTCOG Construction Standards Fifth Edition

Division 1000 Drawings

The slides in this presentation reflect the edits discussed at the July 2, 2018 Standard Drawings Subcommittee meeting.



PLAN VIEW



For channel material, see Note 6

CROSS SECTION

INTERCEPTOR SWALE

STANDARD SPECIFICATION REFERENCE	
202.6 *	
DATE	STANDARD DRAWING NO.
OCT. '04	1030A

INTERCEPTOR SWALE GENERAL NOTES:

1. ALL TREES, BRUSH, STUMPS, OBSTUCTIONS AND OTHER MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.

2. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS-SECTION AS REQUIRED TO MEET CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.

3. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE DISPOSED OF IN AN APPROVED SPOILS SITE SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.

4. DIVERTED RUNOFF FROM A DISTURBED OR EXPOSED UPLAND AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.

5. THE ON-SITE LOCATION MAY NEED TO BE ADJUSTED TO MEET FIELD CONDITIONS IN ORDER TO UTILIZE THE MOST SUITABLE OUTLET.

Replace "grades" with "longitudinal slopes"

6. FOR ~~GRADES~~ LESS THAN 2 PERCENT AND VELOCITIES LESS THAN 6 FEET PER SECOND, THE MINIMUM REQUIRED CHANNEL STABILIZATION SHALL BE GRASS, EROSION CONTROL MATS OR MULCHING. FOR ~~GRADES~~ IN EXCESS OF 2 PERCENT OR VELOCITIES EXCEEDING 6 FEET PER SECOND, STABILIZATION IS REQUIRED IN THE FORM OF TURF REINFORCEMENT MATS (OR ~~A LAYER OF CRUSHED STONE OR~~ RIP-RAP WITH APPROPRIATE SIZE, GRADATION, AND THICKNESS AS SPECIFIED IN THE SWPPP).

7. MINIMUM COMPACTION FOR THE SWALE SHALL BE ~~90~~ 95% PERCENT STANDARD PROCTOR.

8. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP.

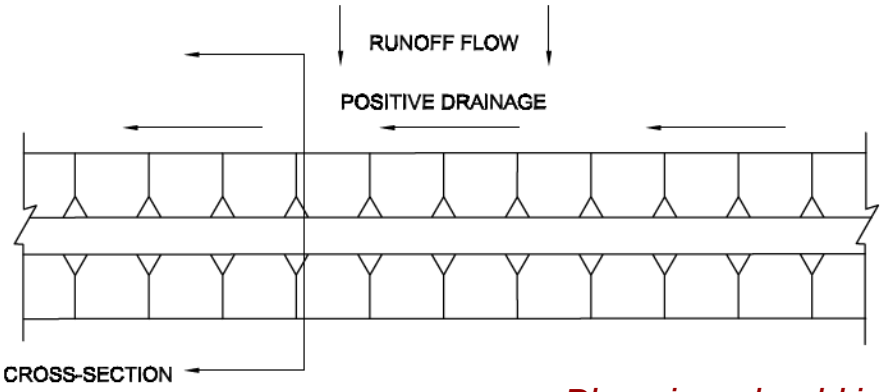
INTERCEPTOR SWALE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.6 *	
		DATE OCT. '04	STANDARD DRAWING NO. 1030B

Provide edits/additions below:

9. For temporary stabilization rip-rap; width, depth, and surface water elevation should be designed by owner or owner's representative.

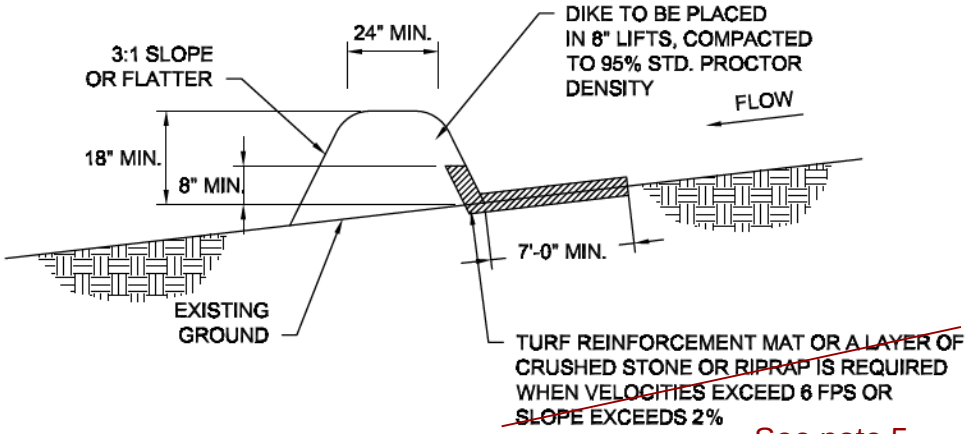
10. Refer to Drawing 1230A and B for turf reinforcement mat.

11. See iSWM Manual for more information on interceptor swale.



PLAN VIEW

Plan view should include an "outlet flow" arrow.

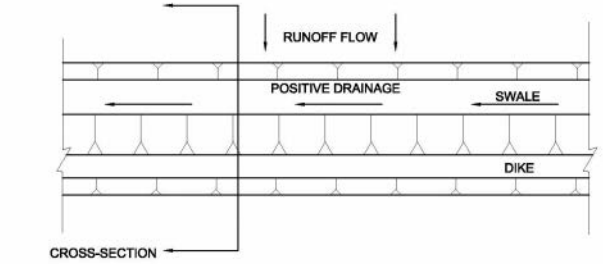


See note 5

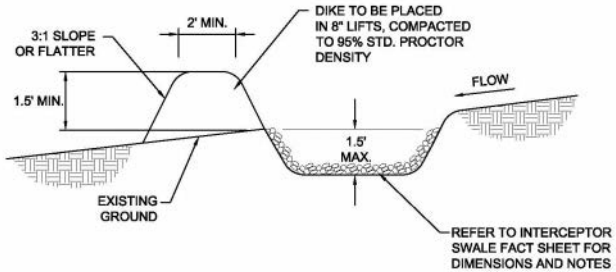
CROSS SECTION

DIVERSION DIKE

STANDARD SPECIFICATION REFERENCE	
202.7 *	
DATE	STANDARD DRAWING NO.
OCT. '04	1040A



DIVERSION DIKE WITH SWALE PLAN VIEW
N.T.S.



DIVERSION DIKE WITH SWALE CROSS SECTION
N.T.S.

Standard Specification Reference	
Date	Standard Drawing No. 1040B

Figure 2.6 Schematics of Diversion Dike with Swale

DIVERSION DIKE GENERAL NOTES:

1. ALL DIKES SHALL BE PLACED IN 8" LIFTS OR LESS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.

2. ALL DIVERSION DIKES SHALL HAVE POSITIVE DRAINAGE TO A CONTROLLED OUTLET.

3. DIVERTED RUNOFF FROM A PROTECTED OR STABILIZED AREA SHALL HAVE ITS OUTLET FLOW DIRECTED TO AN UNDISTURBED STABILIZED AREA OR INTO A LEVEL SPREADER OR GRADE STABILIZATION STRUCTURE.

"Refer to Item 202.7 in the Standard Specifications."

4. DIVERTED RUNOFF FROM A DISTURBED OR EXPOSED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.

Replace "grades" with "longitudinal slopes"

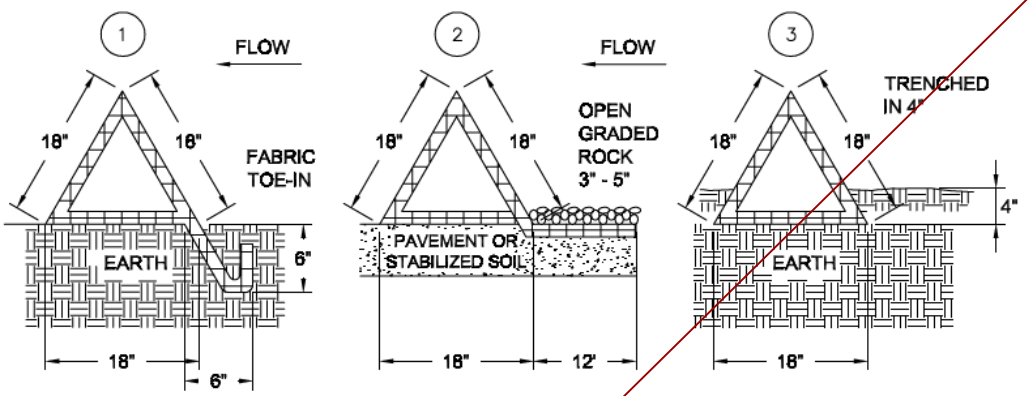
5. FOR ~~GRADES~~ LESS THAN 2 PERCENT AND VELOCITIES LESS THAN 6 FEET PER SECOND, THE MINIMUM REQUIRED CHANNEL STABILIZATION SHALL BE GRASS, EROSION CONTROL MATS OR MULCHING. FOR ~~GRADES~~ IN EXCESS OF 2 PERCENT OR VELOCITIES EXCEEDING 6 FEET PER SECOND, STABILIZATION IS REQUIRED IN THE FORM OF TURF REINFORCEMENT MATS (OR ~~A LAYER OF CRUSHED STONE OR~~ RIP-RAP WITH APPROPRIATE SIZE, GRADATION, AND THICKNESS AS SPECIFIED IN THE SWPPP).

6. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP.

DIVERSION DIKE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.7*	
		DATE OCT. '04	STANDARD DRAWING NO. ~~1040B~~ 1040C

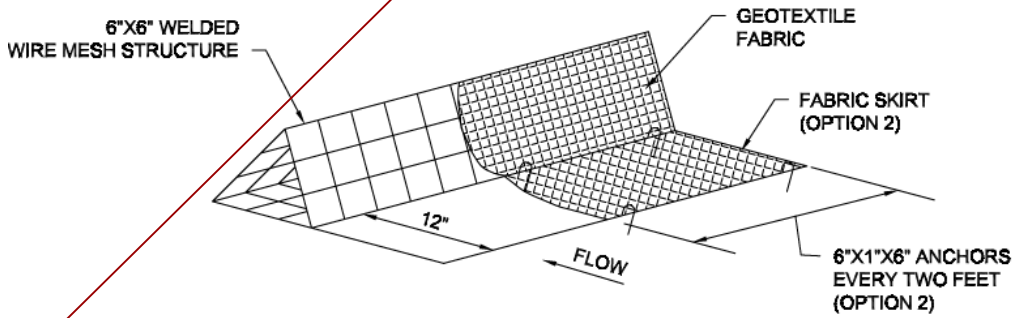
Provide edits/additions below:

7. See iSWM Manual for more information on Diversion Dikes.



CROSS SECTION OF INSTALLATION OPTIONS

1. TOE-IN 6" MIN.
2. FABRIC SKIRT WEIGHTED WITH ROCK
3. TRENCHED IN 4"

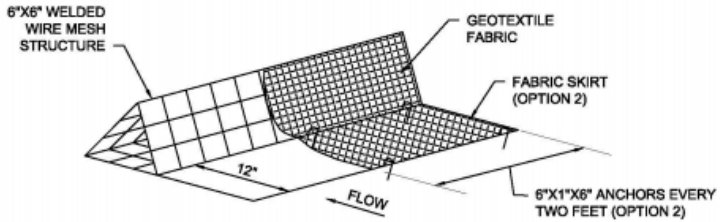


ISOMETRIC PLAN VIEW

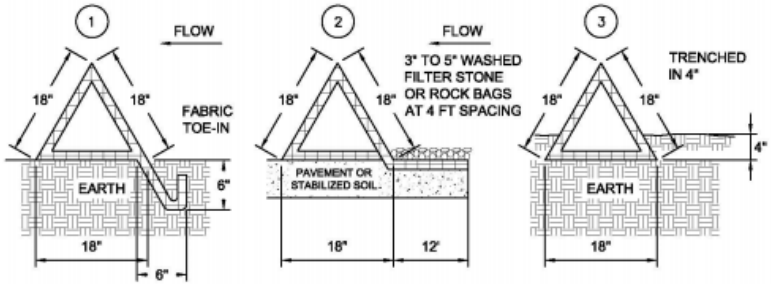
Replace 1050A with iSWM 3.32

STANDARD SPECIFICATION REFERENCE	
202.8 *	
DATE	STANDARD DRAWING NO.
OCT. '04	1050A

TRIANGULAR SEDIMENT FILTER DIKE



ISOMETRIC PLAN VIEW
N.T.S.



1. TOE-IN 6" MIN
2. FABRIC SKIRT WEIGHTED WITH FILTER STONE
   (ROCK BAGS MAY BE SUBSTITUTED FOR FILTER STONE)
3. TRENCHED IN 4"

CROSS SECTION OF INSTALLATION OPTIONS
N.T.S.

Figure 3.32 Schematics of Triangular Sediment Filter Dike

Standard Specification Reference 202.8 *	
Date	Standard Drawing No. 1050A

TRIANGULAR SEDIMENT FILTER DIKE GENERAL NOTES:

1. DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT DIKE.

2. THE FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE FABRIC ON THE UPSTREAM FACE, AND FABRIC SHALL BE OVERLAPPED A MINIMUM OF 12".

3. THE SKIRT SHALL BE WEIGHTED WITH A CONTINUOUS LAYER OF TYPE 'A' RIP RAP, OR TOED–IN 6" WITH MECHANICALLY COMPACTED MATERIAL. OTHERWISE, THE ENTIRE STRUCTURE SHALL BE TRENCHED TO A DEPTH OF 4 INCHES.

4. DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE USING 6–INCH WIRE STAPLES ON 2–FOOT CENTERS ON BOTH EDGES AND SKIRTS.

5. FILTER MATERIAL SHALL BE LAPPED OVER ENDS 6" TO COVER DIKE TO DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.

6. THE DIKE STRUCTURE SHALL BE 6 GA. 6" X 6" WIRE MESH, 18" ON A SIDE.

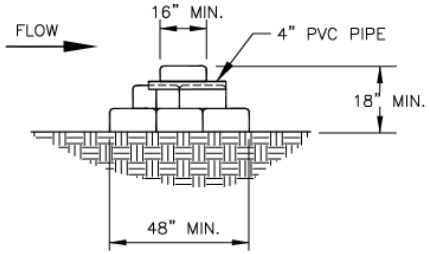
7. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.

8. THE FILTER DIKE SHALL BE REMOVED WHEN FINAL STABILIZATION IS ACHIEVED OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED.

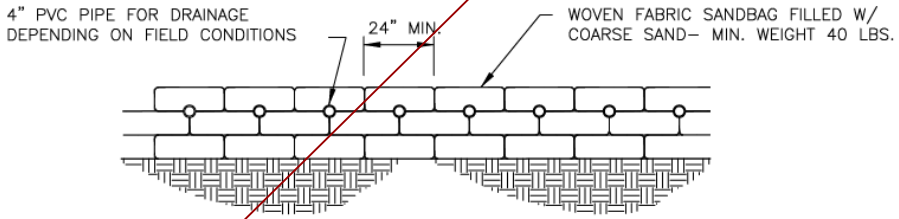
9. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES APPROXIMATELY 6–INCHES IN DEPTH. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

TRIANGULAR SEDIMENT FILTER DIKE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: 202.8 *	
		DATE: OCT. '04	STANDARD DRAWING NO.: 1050B

Provide edits/additions below:



CROSS SECTION
N.T.S.



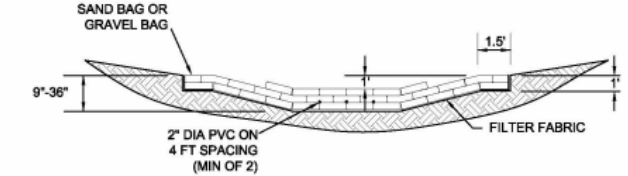
PROFILE VIEW
N.T.S.

NOTE: SAND BAG CHECK DAM CONSTRUCTION AND PLACEMENT SHALL BE IN ACCORDANCE WITH THE SPACING, CROSS–SECTION, AND PROFILE VIEWS OF THE ROCK CHECK DAM IN DRAWING 1060A.

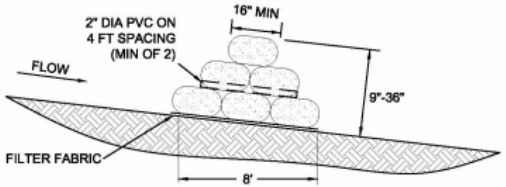
Replace 1080A with iSWM 2.2

STANDARD SPECIFICATION REFERENCE	
201.10. Check Dam (Filter Tube)	
DATE	STANDARD DRAWING NO.
OCT. '04	1080A

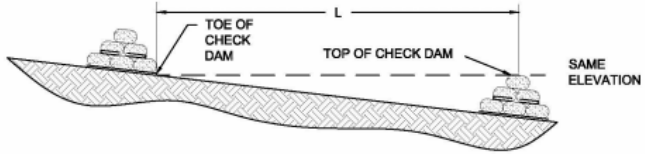
SAND BAG CHECK DAM



ROCK BAG CHECK DAM VIEW LOOKING UPSTREAM
N.T.S.



CROSS SECTION OF ROCK BAG CHECK DAM
N.T.S.



SPACING BETWEEN ROCK BAG CHECK DAMS
N.T.S.

NOTES: ACTUAL DIMENSIONS OF THE CHECK DAMS SHALL BE DESIGNED BASED ON FLOW CONDITIONS IN THE DRAINAGE SWALE OR DITCH. PROVIDE CALCULATIONS THAT DOCUMENT THE FOLLOWING PARAMETERS USED TO DESIGN THE CHECK DAMS.

- HEIGHT OF CHECK DAMS BASED ON SWALE OR DITCH DIMENSIONS AND FLOW CONDITIONS.
- SPACING OF CHECK DAMS BASED ON GRADE OF THE SWALE OR DITCH. TOP OF DOWNSTREAM DAM SHALL BE AT SAME ELEVATION AS TOE OF UPSTREAM DAM.

Standard Specification Reference 202.10 *	
Date	Standard Drawing No. 1080A

Figure 2.2 Schematics of Rock Bag Check Dams

SAND BAG CHECK DAM GENERAL NOTES:

1. WHEN A SANDBAG IS FILLED WITH MATERIAL, THE OPEN END OF THE SANDBAG SHOULD BE STAPLED OR TIED WITH NYLON OR POLY CORD.

2. SANDBAGS SHOULD BE STACKED IN AT LEAST THREE ROWS ABUTTING EACH OTHER, AND IN STAGGERED ARRANGEMENT.

3. THE BASE OF THE CHECK DAM SHOULD HAVE AT LEAST 3 SANDBAGS. THESE CAN BE REDUCED TO 2 AND 1 BAG IN THE SECOND AND THIRD ROWS RESPECTIVELY.

4. FOR EACH ADDITIONAL 6" OF HEIGHT, AN ADDITIONAL SANDBAG MUST BE ADDED TO EACH ROW WIDTH.

5. THE SANDBAG CHECK DAM SHALL BE INSPECTED AS SPECIFIED IN THE SWPPP AND SHALL BE RESHAPED OR REPLACED AS NEEDED. REPAIRS SHALL BE MADE FOR WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

6. WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD OF THE HEIGHT OF THE CHECK DAM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CREATE A SILTATION PROBLEM.

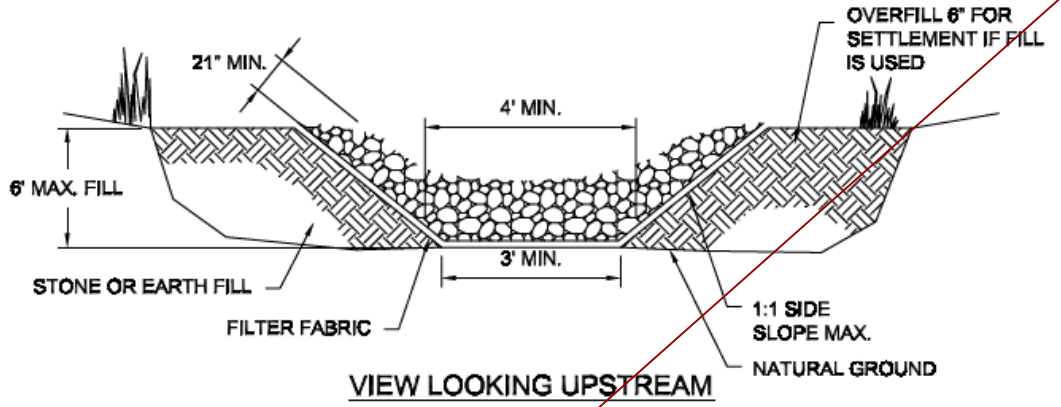
7. WHEN THE SITE HAS ACHIEVED FINAL STABILIZATION OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED, THE CHECK DAM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

202.10

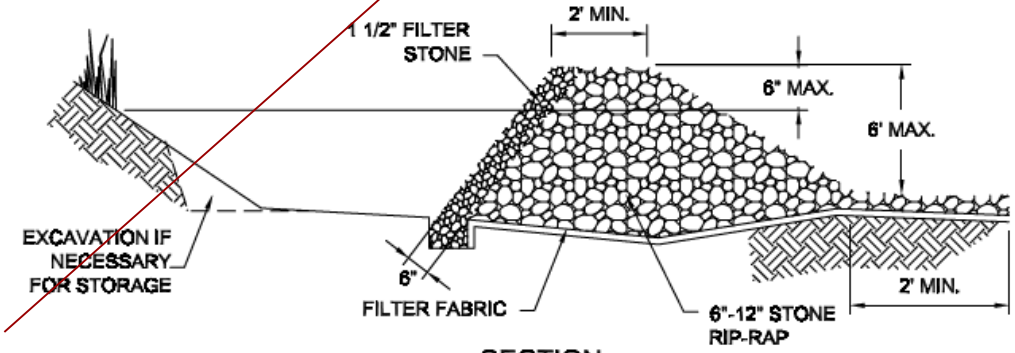
SAND BAG CHECK DAM	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE ~~201.10~~	
		DATE OCT. '04	STANDARD DRAWING NO. 1080B

Provide edits/additions below:

8. See iSWM Manual for more information on Sand Bag Check Dam



VIEW LOOKING UPSTREAM

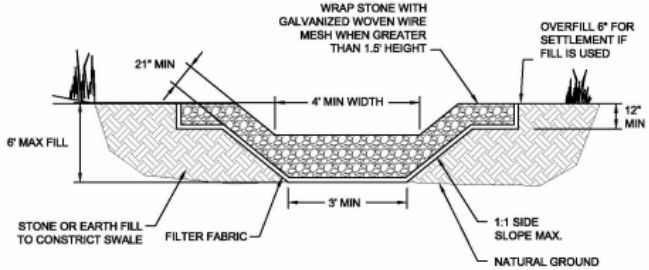


SECTION

Replace 1090A with iSWM 3.30 and 3.31

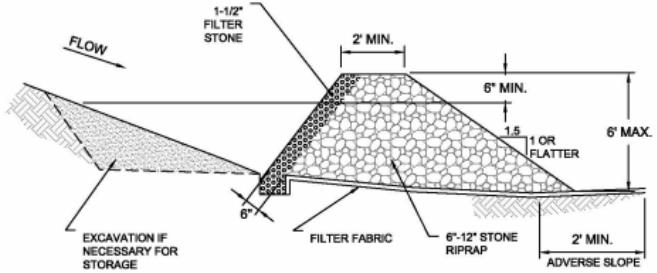
STANDARD SPECIFICATION REFERENCE	
202.12 *	
DATE	STANDARD DRAWING NO.
OCT. '04	1090

STONE OUTLET SEDIMENT TRAP



EXCAVATED STONE OUTLET SEDIMENT TRAP VIEW LOOKING UPSTREAM

N.T.S.



EXCAVATED STONE OUTLET SEDIMENT TRAP SECTION VIEW

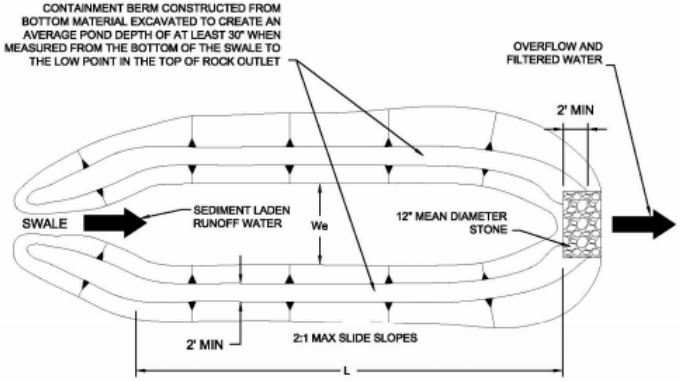
N.T.S.

NOTE: ACTUAL DIMENSIONS OF THE SEDIMENT TRAP SHALL BE DESIGNED BASED ON FLOW CONDITIONS AND SITE TOPOGRAPHY. PROVIDE CALCULATIONS THAT DOCUMENT THE FOLLOWING PARAMETER USED TO DESIGN THE TRAP.

- SIZE OF CONTRIBUTING DRAINAGE AREA
- DESIGN STORM VOLUME AND FLOW RATE AT THE TRAP
- HEIGHT, SLOPE, AND LENGTH OF STONE OUTLET
- STORAGE VOLUME
- EXTENT OF GRADING TO PROVIDE THE CONTROLLED OUTLET

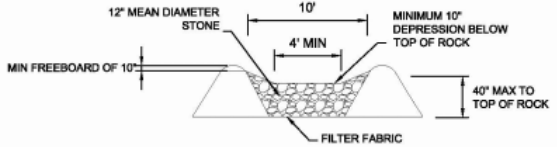
Standard Specification Reference	
202.12 *	
Date	Standard Drawing No.
	1090A

Figure 3.30 Schematics of Excavated Stone Outlet Sediment Trap



BERMED STONE OUTLET SEDIMENT TRAP PLAN VIEW

N.T.S.



BERMED STONE OUTLET SEDIMENT TRAP SECTION VIEW

N.T.S.

NOTE: ACTUAL DIMENSIONS OF THE SEDIMENT TRAP SHALL BE DESIGNED BASED ON FLOW CONDITIONS AND SITE TOPOGRAPHY. PROVIDE CALCULATIONS THAT DOCUMENT THE FOLLOWING PARAMETER USED TO DESIGN THE TRAP.

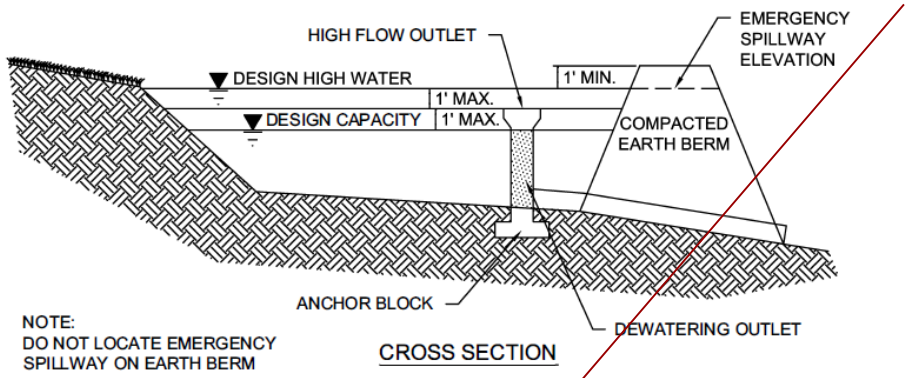
- SIZE OF CONTRIBUTING DRAINAGE AREA
- DESIGN STORM VOLUME AND FLOW RATE AT THE TRAP
- HEIGHT, SLOPE, AND LENGTH OF STONE OUTLET
- STORAGE VOLUME
- EXTENT OF GRADING TO PROVIDE THE CONTROLLED OUTLET

TRIBUTARY AREA (ACRES)	L (FT)	We (FT)
< 0.5	59	13
0.51-1.0	82	16
1.01-1.5	102	20
1.51-2.0	118	23
2.01-2.5	131	26
2.51-3.0	144	30
3.01-3.5	154	30
3.51-4.0	167	33
4.01-4.5	177	36
4.51-5.0	187	36

Standard Specification Reference	
202.12 *	
Date	Standard Drawing No.
	1090B

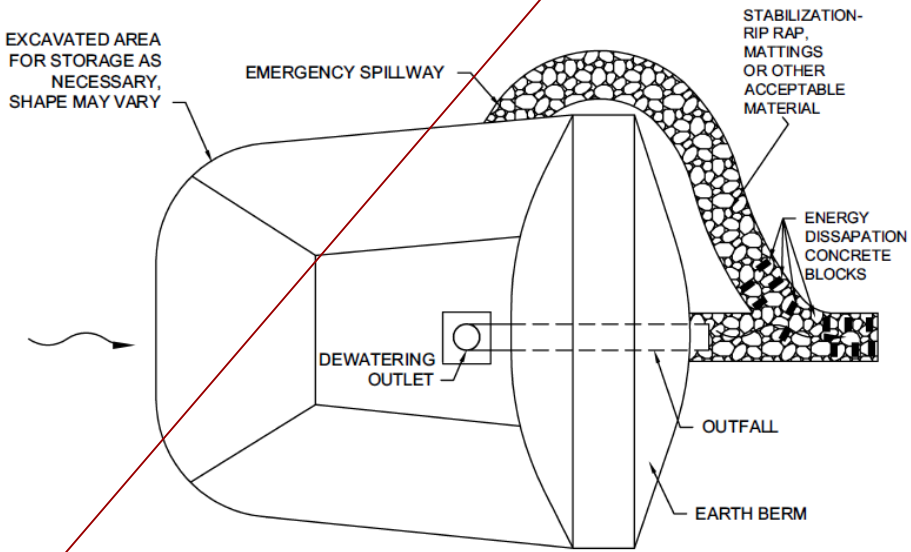
Figure 3.31 Schematics of Bermed Stone Outlet Sediment Trap

(Source: City of Chesterfield Department of Public Works Detail SC 7.2)



NOTE:
DO NOT LOCATE EMERGENCY SPILLWAY ON EARTH BERM

CROSS SECTION



PLAN VIEW

Replace 1100 with iSWM 3.20

STANDARD SPECIFICATION REFERENCE	
DATE: OCT. '04	STANDARD DRAWING NO.: 1100

PIPE OUTLET SEDIMENT BASIN

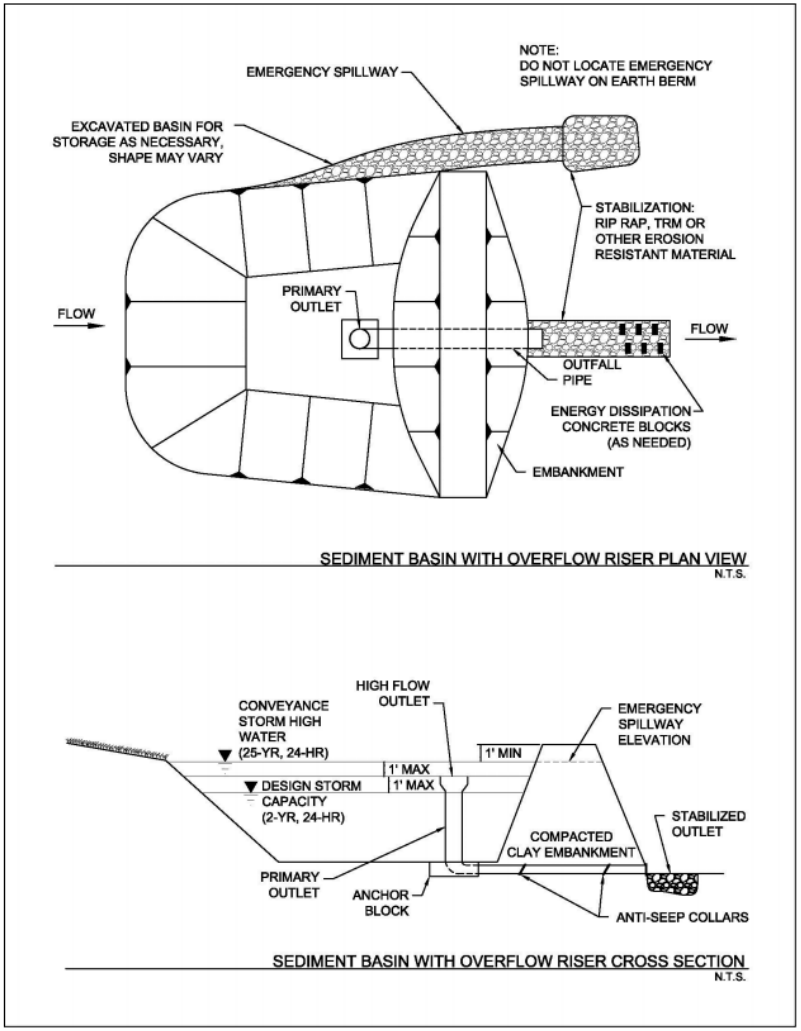


Figure 3.20 Schematics of Sediment Basin with Overflow Riser

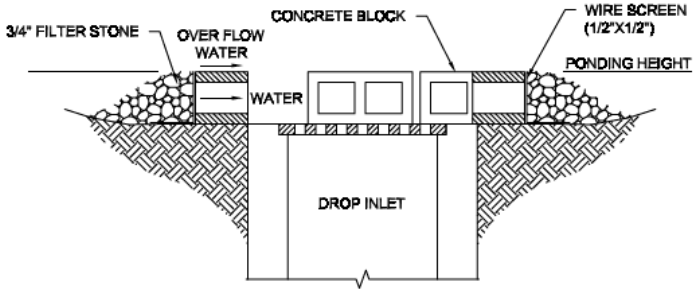
Standard Specification Reference	
Date	Standard Drawing No. 1100

Additional Edits

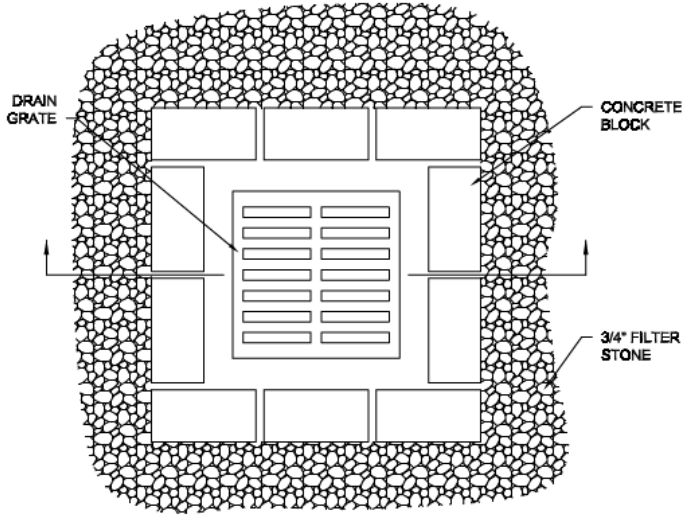
Drawing Titles

DIVISION 1000 EROSION AND SEDIMENT CONTROL

TABLE OF CONTENTS

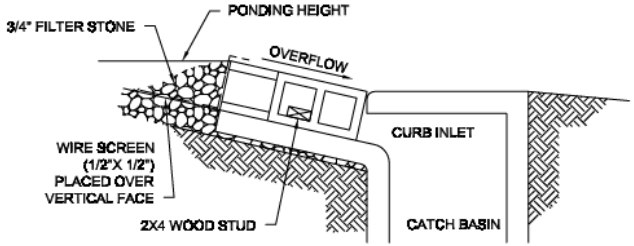


CROSS SECTION

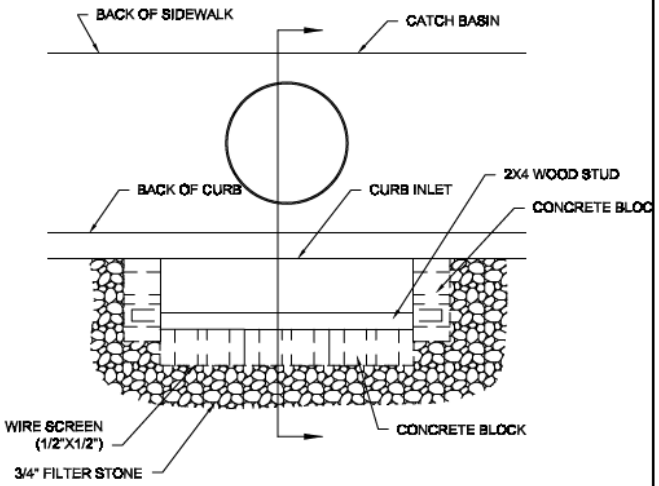


PLAN VIEW

INLET PROTECTION—DROP	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.14 *	
BLOCK AND GRAVEL		DATE OCT. '04	STANDARD DRAWING NO. 1130



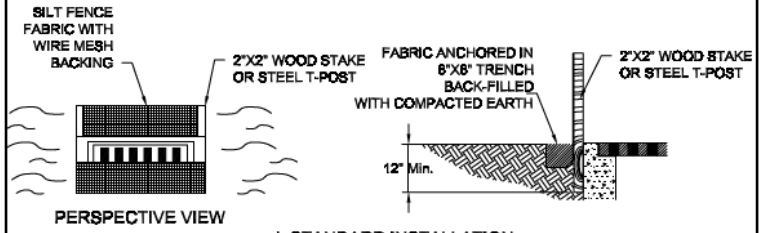
CROSS SECTION



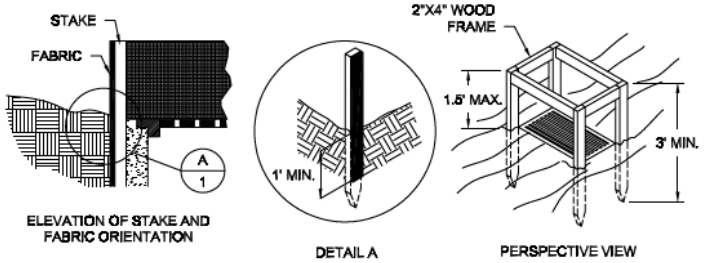
PLAN VIEW

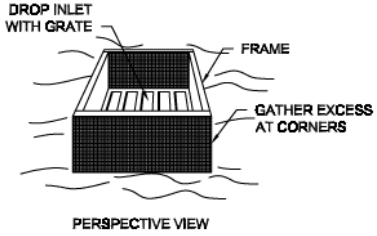
INLET PROTECTION—CURB	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.14 *	
BLOCK AND GRAVEL		DATE OCT. '04	STANDARD DRAWING NO. 1140

*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. *Public Works Construction Standards North Central Texas, Fifth Edition.*



I. STANDARD INSTALLATION





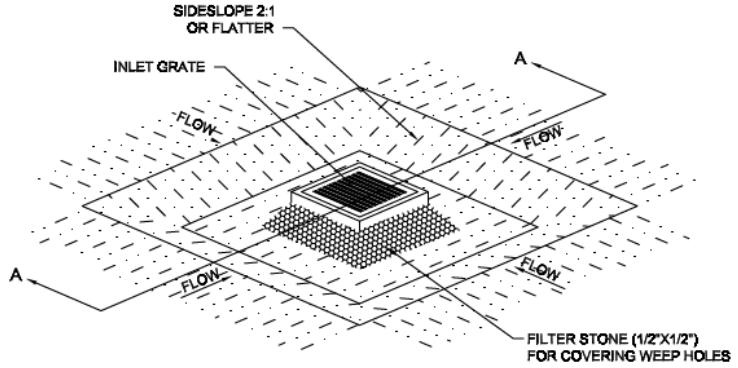
SPECIFIC APPLICATION:
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPE NO GREATER THAN 5 %) WHERE THE INLET SHEET OR OVER-LAND FLOWS (NOT TO EXCEED 1 C.F.S.) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS SUCH AS IN STREETS OR HIGHWAY MEDIANS.

II. ALTERNATE INSTALLATION

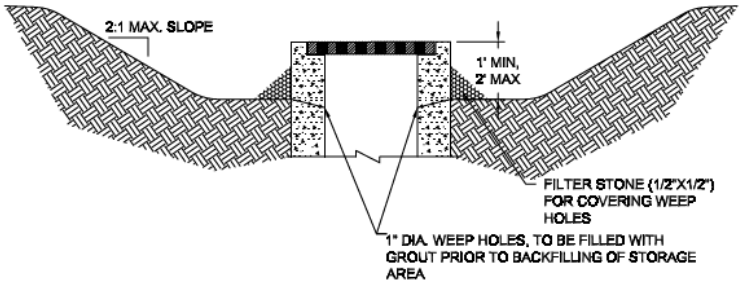
INLET PROTECTION-AREA

~~INLET PROTECTION~~ FILTER BARRIER	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.14 *	
		DATE OCT. '04	STANDARD DRAWING NO. 1120

*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. *Public Works Construction Standards North Central Texas, Fifth Edition.*



ISOMETRIC PLAN VIEW



SECTION A-A

INLET PROTECTION-AREA

~~INLET PROTECTION~~ EXCAVATED IMPOUNDMENT	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.14 *	
		DATE OCT. '04	STANDARD DRAWING NO. 1150

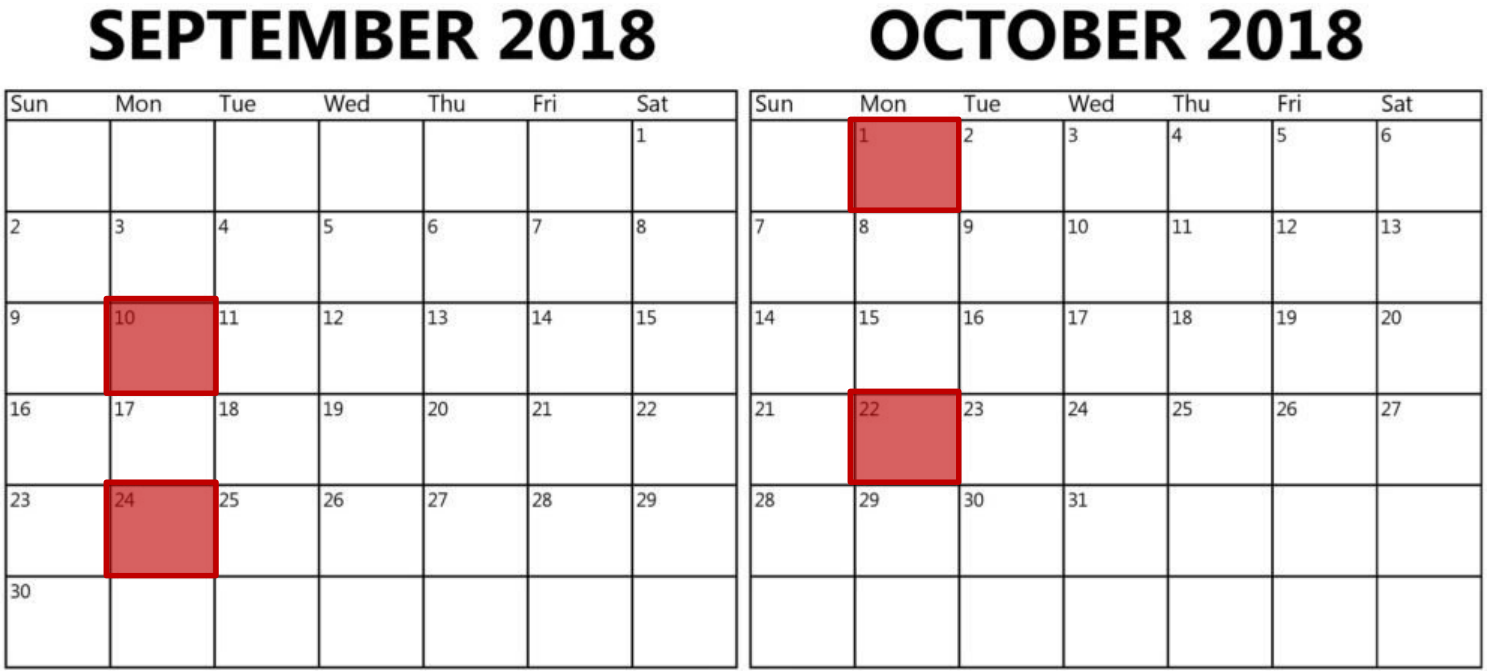
*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. *Public Works Construction Standards North Central Texas, Fifth Edition.*

Drawing #	Original #	Subject	Spec. Page Number	Equivalent iSWM Schematic		Halff Revision
1020A,B	1020A,B	Silt Fence	202.5. Pages 202-3 to 202-4	Figure 3.28	Detail for Silt Fence	2017
1030A,B	1030A,B	Interceptor Swale	202.6. Page 202-4	Figure 2.9	Schematics of Interceptor Swale	-
1040A,B	1040A,B	Diversion Dike	202.7. Page 202-4	Figure 2.5	Schematics of Diversion Dike	-
1050A,B	1050A,B	Triangular Sediment Filter Dike	202.8. Pages 202-4 to 202-5	Figure 3.32	Schematics of Triangular Sediment Filter Dike	-
1060A,B	1060A,B	Rock Check Dam	202.9. Pages 202-50 to 202-6	Figure 2.1	Rock Check Dams	2017
1070A,B	1070A,B	Stabilized Construction Exit	202.11. Pages 202-60 to 202-7	Figure 3.29	Stabilized Construction Exit	2017
1080A,B	1080A,B	Sand Bag Check Dam	N/A	Figure 2.2	Schematics of Rock Bag Check Dams	-
1090	1090	Stone Outlet - Sediment Trap	202.12. Pages 202-7 to 202-8	Figure 3.30	Schematics of Excavated Stone Outlet Sediment Trap	-
1100	1100	Pipe Outlet - Sediment Basin	N/A	Figure 3.20	Sediment Basin with Overflow Riser	2017
1110	1110	Pipe Slope Drain	202.13. Page 202-8	Figure 2.10	Schematics of Pipe Slope Drain	-
1120	-	Pipe Outlet Velocity Dissipation Device	-	Figure 2.13	Schematics of Velocity Dissipation Device	2018
1130	1120	Inlet Protection-Area - Filter Barrier	202.14. Pages 202-9 to 202-11	Figure 3.10	Filter Fabric Area Inlet Protection	2018
1140	1130	Inlet Protection-Drop - Block and Gravel	202.14. Pages 202-9 to 202-11	-	-	-
1150	1150	Inlet Protection-Area - Excavated Impoundment	202.14. Pages 202-9 to 202-11	Figure 3.11	Schematics of Excavated Impoundment Area Inlet Protection	2018
1160	-	Inlet Protection-Area - Filter Tube	-	Figure 3.13	Filter Tube Area Inlet Protection	2017
1170	1140	Inlet Protection-Curb - Block and Gravel	202.14. Pages 202-9 to 202-11	Figure 3.8	Schematics of Block and Gravel Filter Curb Inlet Protection	-
1180	-	Inlet Protection-Curb - Weir and Filter Stone	-	Figure 3.5	Schematics of 2"x4" Weir Curb Inlet Protection	2018
1190	-	Inlet Protection-Curb - Filter Tube	-	Figure 3.6	Filter Tube Curb Inlet Protection	2017
1200	-	Inlet Protection-Curb - Hog Wire Weir	-	Figure 3.7	Hog Wire Weir Curb Inlet Protection	2017
1210	-	Inlet Protection-On-Grade Curb - Rock Sock	-	Figure 3.9	Curb Rock Sock On-Grade Curb Inlet Protection	2017
1220A	1160A	Temporary Erosion Control Blankets	202.15. Page 202-11	Figure 2.7	Temporary Erosion Control Blankets	2017
1220B	1160B	Anchor Examples for Temporary Erosion Control Blankets	202.15. Page 202-11	Figure 2.8	Anchor Examples for Erosion Control Blankets	2018
1230A	-	Permanent Turf Reinforcement Mats	-	Figure 2.11	Schematics of Turf Reinforcement Mats	2018
1230B	-	Permanent Turf Reinforcement Mats Anchoring	-	Figure 2.12	Examples of Turf Reinforcement Mat Anchoring	2018
1240	-	Dewatering Controls	-	Figure 3.4	Dewatering Controls	2017
1250	-	Concrete Washout Containment	-	Figure 4.1	Schematics of Concrete Washout Containment	2018
1260	-	Grouted Rock Rip-Rap	-	-	-	2018
1270	-	Stream Trash Catch/Screen	-	-	-	2018

Next Steps

Determine action items for subcommittee members and NCTCOG staff

Next Meeting – Possible Dates



Sept. 10, Six Flags Conference Room
Sept. 24, Pecan Conference Room

Oct. 1, Regional Forum Room
Oct. 22, Six Flags Conference Room

NCTCOG Construction Standards Fifth Edition

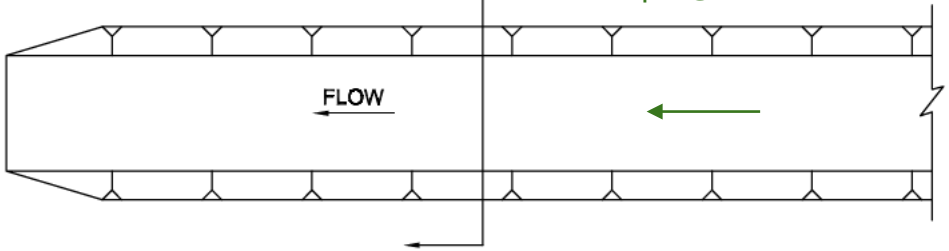
Division 1000 Drawings

Slides 2 - 3: 1030A, 1030B Interceptor Swale
Slides 4 - 5: 1040A, 1040B Diversion Dike
Slides 6 - 7: 1050A, 1050B Triangular Sediment Filter Dike
Slides 8 - 9: 1080A, 1080B Sand Bag Check Dam
Slide 10: 1090 Stone Outlet, Sediment Trap
Slide 11: 1110 Pipe Slope Drain

**When providing comments on the following drawings, please preface edits with your initials.*

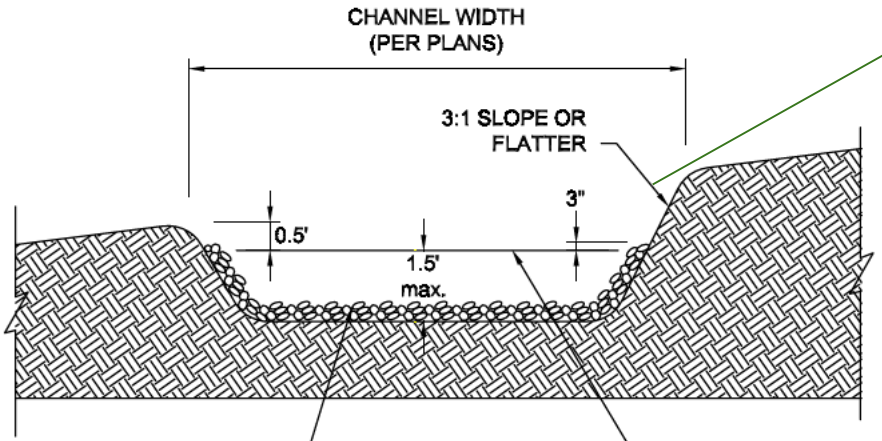
CROSS SECTION

KM - Slope @ 2% or less, or add reinforcement. See note below.



PLAN VIEW

KM - TRM extend beyond top of bank



KM - Per detail #

KM - Define material better? Rock size, etc. (See note 6 for reinforcement)

TURF REINFORCEMENT MAT OR A LAYER OF CRUSHED STONE OR RIPRAP IS REQUIRED WHEN VELOCITIES EXCEED 6 FPS OR SLOPE EXCEEDS 2.0 %

Which slope?

CROSS SECTION

INTERCEPTOR SWALE

STANDARD SPECIFICATION REFERENCE	
202.6 *	
DATE	STANDARD DRAWING NO.
OCT. '04	1030A

KM - temporary device?

INTERCEPTOR SWALE GENERAL NOTES:

1. ALL TREES, BRUSH, STUMPS, OBSTUCTIONS AND OTHER MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.

2. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS-SECTION AS REQUIRED TO MEET CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.

3. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE DISPOSED OF IN AN APPROVED SPOILS SITE SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.

4. DIVERTED RUNOFF FROM A DISTURBED OR EXPOSED UPLAND AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.

5. THE ON-SITE LOCATION MAY NEED TO BE ADJUSTED TO MEET FIELD CONDITIONS IN ORDER TO UTILIZE THE MOST SUITABLE OUTLET.

6. FOR GRADES LESS THAN 2 PERCENT AND VELOCITIES LESS THAN 6 FEET PER SECOND, THE MINIMUM REQUIRED CHANNEL STABILIZATION SHALL BE GRASS, EROSION CONTROL MATS OR MULCHING. FOR GRADES IN EXCESS OF 2 PERCENT OR VELOCITIES EXCEEDING 6 FEET PER SECOND, STABILIZATION IS REQUIRED IN THE FORM OF TURF REINFORCEMENT MATS (OR A LAYER OF CRUSHED STONE OR RIP-RAP WITH APPROPRIATE SIZE, GRADATION, AND THICKNESS AS SPECIFIED IN THE SWPPP).

KM - recycled concrete?

7. MINIMUM COMPACTION FOR THE SWALE SHALL BE 90 PERCENT STANDARD PROCTOR.

KM - 95%

8. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP.

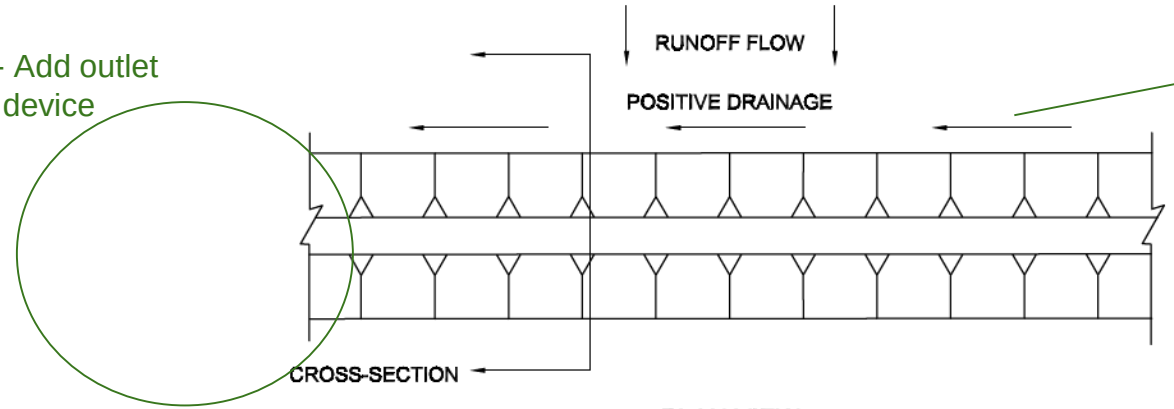
INTERCEPTOR SWALE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.6 *	
		DATE OCT. '04	STANDARD DRAWING NO. 1030B

Provide edits/additions below:

JCI - The TRM should extend beyond the top of banks to match with the TRM details we already are using

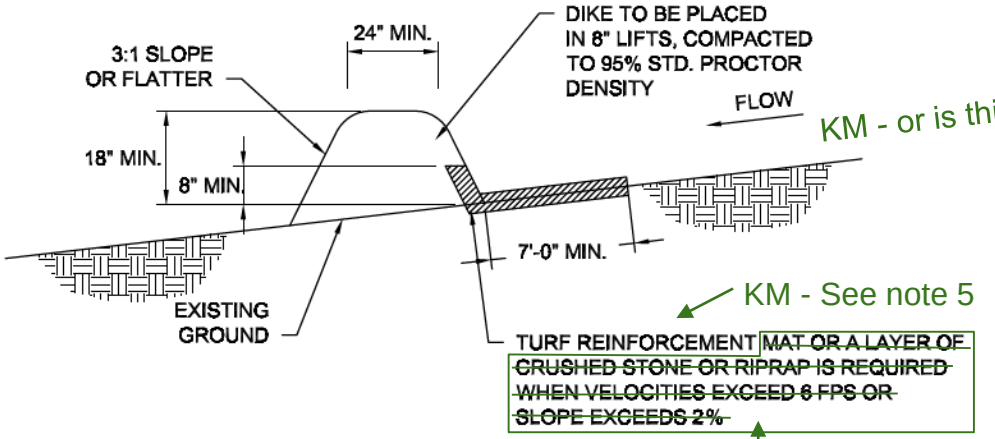
KM - Design by professional engineer

KM - Add outlet flow device



KM - slope per note?

PLAN VIEW



KM - or is this the 2% max slope?

KM - See note 5

KM - define

CROSS SECTION

DIVERSION DIKE

STANDARD SPECIFICATION REFERENCE	
202.7 *	
DATE	STANDARD DRAWING NO.
OCT. '04	1040A

DIVERSION DIKE GENERAL NOTES:

1. ALL DIKES SHALL BE PLACED IN 8" LIFTS OR LESS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.

2. ALL DIVERSION DIKES SHALL HAVE POSITIVE DRAINAGE TO A CONTROLLED OUTLET.

3. DIVERTED RUNOFF FROM A PROTECTED OR STABILIZED AREA SHALL HAVE ITS OUTLET FLOW DIRECTED TO AN UNDISTURBED STABILIZED AREA OR INTO A LEVEL SPREADER OR GRADE STABILIZATION STRUCTURE.

KM - at max velocity? Add info from 202.7.1

4. DIVERTED RUNOFF FROM A DISTURBED OR EXPOSED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.

5. FOR GRADES LESS THAN 2 PERCENT AND VELOCITIES LESS THAN 6 FEET PER SECOND, THE MINIMUM REQUIRED CHANNEL STABILIZATION SHALL BE GRASS, EROSION CONTROL MATS OR MULCHING. FOR GRADES IN EXCESS OF 2 PERCENT OR VELOCITIES EXCEEDING 6 FEET PER SECOND, STABILIZATION IS REQUIRED IN THE FORM OF TURF REINFORCEMENT MATS (OR A LAYER OF CRUSHED STONE OR RIP-RAP WITH APPROPRIATE SIZE, GRADATION, AND THICKNESS AS SPECIFIED IN THE SWPPP).

6. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP.

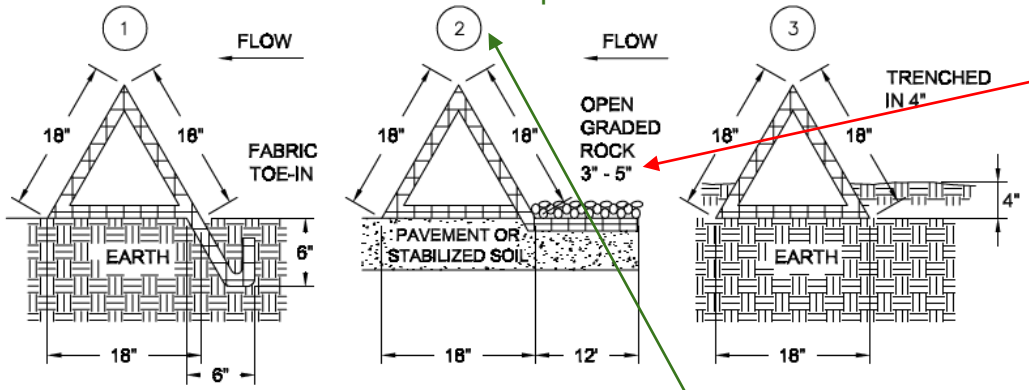
DIVERSION DIKE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.7*	
		DATE OCT. '04	STANDARD DRAWING NO. 1040B

Provide edits/additions below:

KM - Bring in 2.6 from iSWM to combine

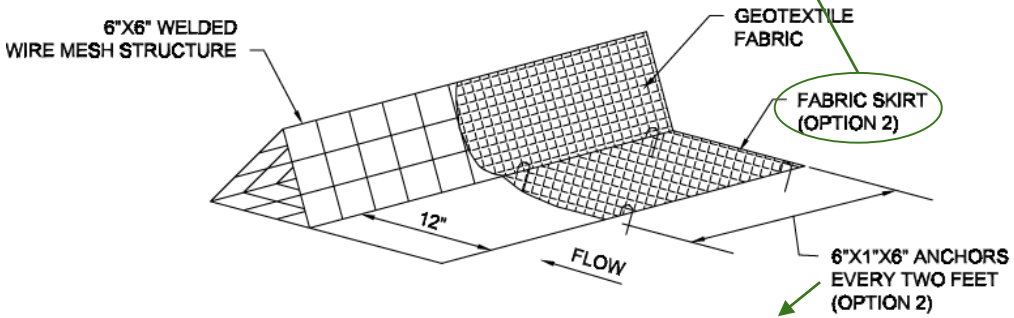
KM - is this option 2?

CT - Assume this means 3” to 5” depth



CROSS SECTION OF INSTALLATION OPTIONS

1. TOE-IN 6" MIN.
2. FABRIC SKIRT WEIGHTED WITH ROCK
3. TRENCHED IN 4"



ISOMETRIC PLAN VIEW

KM - Anchors in lieu of rock?

STANDARD SPECIFICATION REFERENCE	
202.8 *	
DATE	STANDARD DRAWING NO.
OCT. ’04	1050A

TRIANGULAR SEDIMENT FILTER DIKE

TRIANGULAR SEDIMENT FILTER DIKE GENERAL NOTES:

1. DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT DIKE.

2. THE FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE FABRIC ON THE UPSTREAM FACE, AND FABRIC SHALL BE OVERLAPPED A MINIMUM OF 12".

3. THE SKIRT SHALL BE WEIGHTED WITH A CONTINUOUS LAYER OF TYPE 'A' RIP RAP, OR TOED-IN 6" WITH MECHANICALLY COMPACTED MATERIAL. OTHERWISE, THE ENTIRE STRUCTURE SHALL BE TRENCHED TO A DEPTH OF 4 INCHES.

4. DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE USING 6-INCH WIRE STAPLES ON 2-FOOT CENTERS ON BOTH EDGES AND SKIRTS.

5. FILTER MATERIAL SHALL BE LAPPED OVER ENDS 6" TO COVER DIKE TO DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.

6. THE DIKE STRUCTURE SHALL BE 6 GA. 6" X 6" WIRE MESH, 18" ON A SIDE.

7. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.

8. THE FILTER DIKE SHALL BE REMOVED WHEN FINAL STABILIZATION IS ACHIEVED OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED.

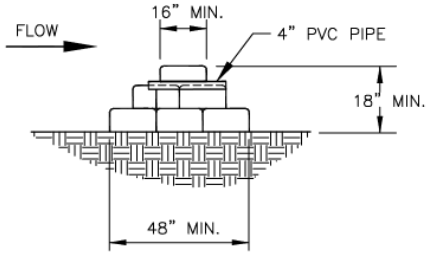
9. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES APPROXIMATELY 6-INCHES IN DEPTH. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

KM - Tied together?

Provide edits/additions below:

CT - Should there be a maximum length?

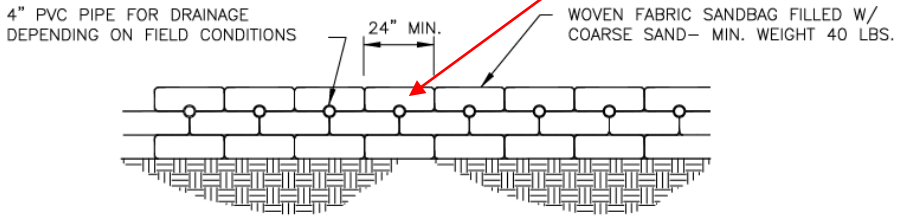
TRIANGULAR SEDIMENT FILTER DIKE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.8 *	
		DATE OCT. '04	STANDARD DRAWING NO. 1050B



CROSS SECTION
N.T.S.

KM - I've never seen these used like this

CT - pipe spacing 24" minimum?



PROFILE VIEW
N.T.S.

NOTE: SAND BAG CHECK DAM CONSTRUCTION AND PLACEMENT SHALL BE IN ACCORDANCE WITH THE SPACING, CROSS–SECTION, AND PROFILE VIEWS OF THE ROCK CHECK DAM IN DRAWING 1060A.

KM - Figure 3.15, 202.10

STANDARD SPECIFICATION REFERENCE	
201.10. Check Dam (Filter Tube)	
DATE	STANDARD DRAWING NO.
OCT. '04	1080A

KM - Any changes?

KM - revised to filter tube

SAND BAG CHECK DAM

SAND BAG CHECK DAM GENERAL NOTES:

1. WHEN A SANDBAG IS FILLED WITH MATERIAL, THE OPEN END OF THE SANDBAG SHOULD BE STAPLED OR TIED WITH NYLON OR POLY CORD.

2. SANDBAGS SHOULD BE STACKED IN AT LEAST THREE ROWS ABUTTING EACH OTHER, AND IN STAGGERED ARRANGEMENT.

3. THE BASE OF THE CHECK DAM SHOULD HAVE AT LEAST 3 SANDBAGS. THESE CAN BE REDUCED TO 2 AND 1 BAG IN THE SECOND AND THIRD ROWS RESPECTIVELY.

4. FOR EACH ADDITIONAL 6" OF HEIGHT, AN ADDITIONAL SANDBAG MUST BE ADDED TO EACH ROW WIDTH.

5. THE SANDBAG CHECK DAM SHALL BE INSPECTED AS SPECIFIED IN THE SWPPP AND SHALL BE RESHAPED OR REPLACED AS NEEDED. REPAIRS SHALL BE MADE FOR WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

6. WHEN SILT REACHES A DEPTH EQUAL TO ONE–THIRD OF THE HEIGHT OF THE CHECK DAM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CREATE A SILTATION PROBLEM.

7. WHEN THE SITE HAS ACHIEVED FINAL STABILIZATION OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED, THE CHECK DAM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

SAND BAG CHECK DAM	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 201.10	
		DATE OCT. '04	STANDARD DRAWING NO. 1080B

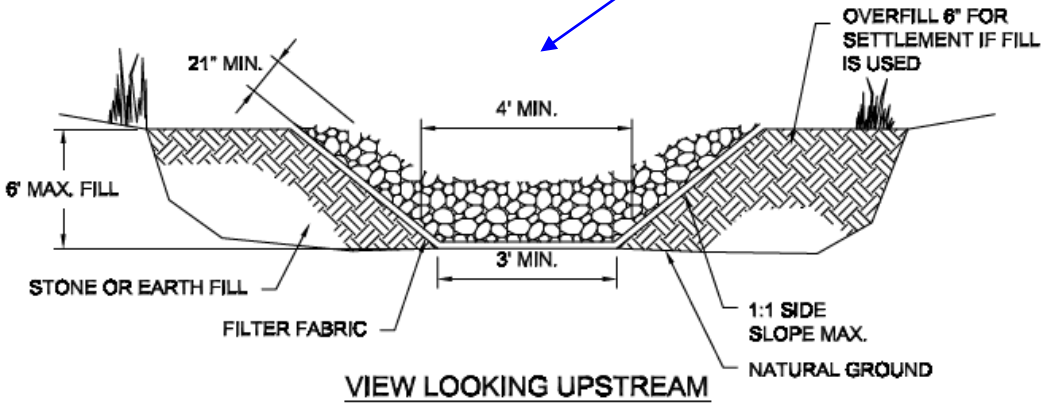
Provide edits/additions below:

JCI - Is this detal ever used? I have only used the rock check dams.

MP- We have only used the rock check dams. Easier to remove after construction is complete.\

KM - Revise to filter tube

JCI - Is the 4’ min for the filter fabric?

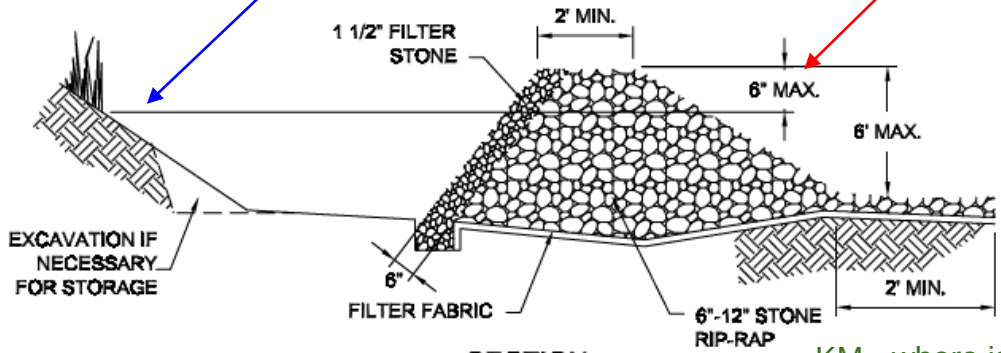


VIEW LOOKING UPSTREAM

KM - I don’t understand this detail. Need plan review?

JCI - Water surface of top of bank?

CT - 1’ minimum

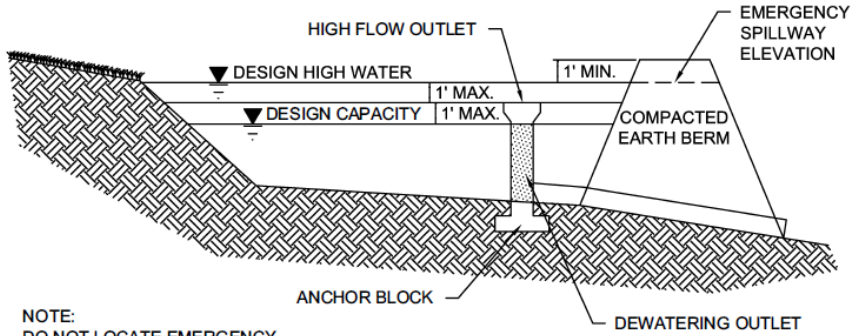


SECTION

KM - where is the outlet?

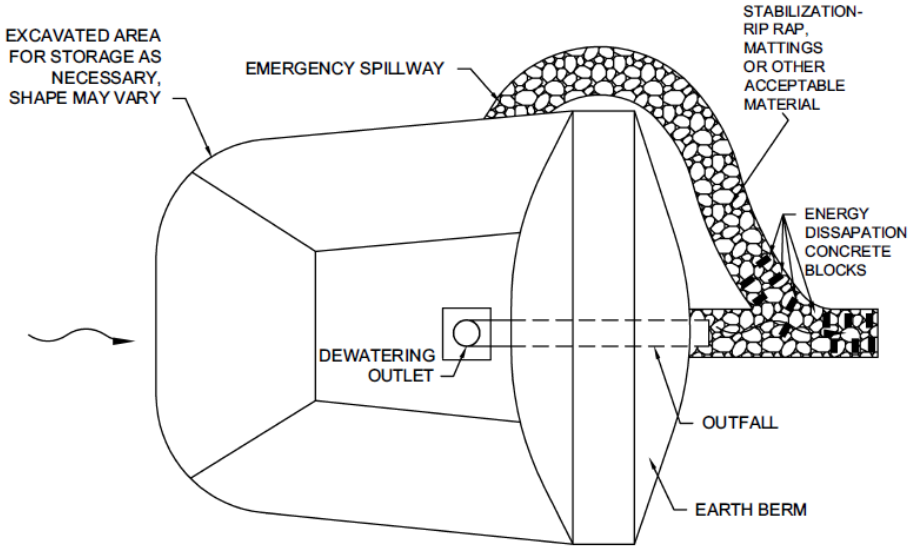
STANDARD SPECIFICATION REFERENCE	
202.12 *	
DATE	STANDARD DRAWING NO.
OCT. ’04	1090

STONE OUTLET
SEDIMENT TRAP



NOTE:
DO NOT LOCATE EMERGENCY SPILLWAY ON EARTH BERM

CROSS SECTION



PLAN VIEW

STANDARD SPECIFICATION REFERENCE	
DATE OCT. '04	STANDARD DRAWING NO. 1100

PIPE OUTLET SEDIMENT BASIN